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LETTER REPORT
FOR
CLARK OIL
Hartford, Madison County, Illinois
TDD: T05-9403-007
PAN: EIL0833BAA

September 9, 1994

Prepared by:
Reviewed by:
Approved by:

Lisa Dwyer
William Dwyer
John Dwyer

Date:
Date:
Date:

9-9-94
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ecology and environment, inc.

111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415

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International Specialists in the Environment

September 9, 1994

Ms. Gail Nabasny, Deputy Project Officer
U.S. Environmental Protection Agency
Emergency Response Section
77 West Jackson Blvd., 5th floor
Chicago, IL 60604-3590

Re: Clark Oil
Hartford, Illinois
TDD: T05-9403-007
PAN: EIL0833BAA

Dear Ms. Nabasny:

The Ecology and Environment, Inc. (E & E) Technical Assistance Team (TAT) was tasked by the United States Environmental Protection Agency (U.S. EPA) under Technical Directive Document # T05-9403-007 to perform on-scene monitoring at Clark Refining & Marketing, Inc. (Clark) at 201 East Hawthorne in Hartford, Madison County, Illinois (See Figure 1 -- Site Location Map). On March 11, 1994, Clark discovered an asphalt spill near their loading dock on the Mississippi River after learning that approximately 1500 barrels of asphalt were missing from their inventory. Clark notified the National Response Center (NRC) at approximately 1600 that same day. An estimated 62,000 gallons of an asphalt/diesel mixture spilled onto land following a pipeline rupture. The material flowed into a nearby drainage ditch which flows to a National Pollutant Discharge Elimination System (NPDES) discharge point on the Mississippi River. The spill was stopped approximately 200 feet east of the river by the construction of an earthen dam (see Figure 2 -- Site Features Map). The pipeline runs from the refinery, approximately .50 miles east of the river, and underneath the town of Hartford until it reaches the levee on Route 3 where it runs overhead. The pipeline is used to load barges on the Mississippi River.

The U.S. EPA and the TAT were at the scene of the incident on March 12 and March 13, 1994. Clark had contractors at the scene constructing an earthen dam and pumping the asphalt/diesel out of the ditch with a vacuum truck. No oil was observed to have reached the Mississippi River. Booms were deployed on the river at the discharge point as a precaution. Also present on the scene were

the U.S. Coast Guard District 2 (USCG) and the Illinois Environmental Protection Agency (IEPA). The U.S. EPA On-Scene Coordinator (OSC) asked the USCG to be on standby in case the spill should reach the river.

The OSC also performed a visual extent of contamination and discussed cleanup standards with Clark and the IEPA. The IEPA was to overview the cleanup with USCG assistance. Attachment B contains a log of site photographs.

On April 1, 1994, the U.S. EPA and the TAT visited the site again to monitor cleanup progress. The facility had made a hose connection to the discharge pipe in the ditch and routed discharge water directly to the Mississippi River to prevent the water from flowing through the contaminated ditch. Clark tested their discharge water and found that it met their NPDES permit requirements.

Clark had excavated a total of 13,949 cubic yards of soil and pumped from the ditch a total of 11,820 barrels of water containing 1% to 3% oil. Pilings were installed in the southwest corner of the facility's discharge lagoon located adjacent to the spill point to prevent oil from entering the lagoon.

Clark hired an environmental consultant, Burns and McDonnell (B & M), who installed six monitoring wells downgradient of the spill. The wells were monitored with a photoionization detector. The headspace of two of the wells gave slight readings above background of 1 to 2 parts per million (ppm) organic vapors. B & M also collected soil samples which were tested for benzene, toluene, ethylbenzene, and xylenes. By performing these functions, B & M helped Clark determine where further cleanup was needed.

On April 11, 1994, Clark had to stop cleanup activities due to heavy rains and flooding of the Mississippi River.

On April 19, 1994, another asphalt spill of approximately 5 to 10 barrels from the same pipeline occurred inside the facility. Clark has decided to have an employee check this pipeline regularly when it is in use.

On May 10, 1994, Clark began excavating soil again and completed all excavation activities on June 20, 1994. A total of 32,354 cubic yards of soil were excavated since cleanup began in March 1994. The soil was disposed of at Laidlaw Landfill in Roxana, Illinois. A total of 17,070 barrels of water/oil were pumped out of the drainage ditch since March 1994. Approximately 1% to 3% of this mixture was oil. The water/oil was put through Clark's water treatment system. B & M is to provide a report to IEPA detailing their actions and sample results during the cleanup. IEPA will then provide a copy of the report to the U.S. EPA OSC.

If you should have any questions, please feel free to contact this office at 312-663-9415.

Sincerely,

A handwritten signature in cursive script, reading "Lisa Graczyk". The signature is written in dark ink and is positioned above the typed name.

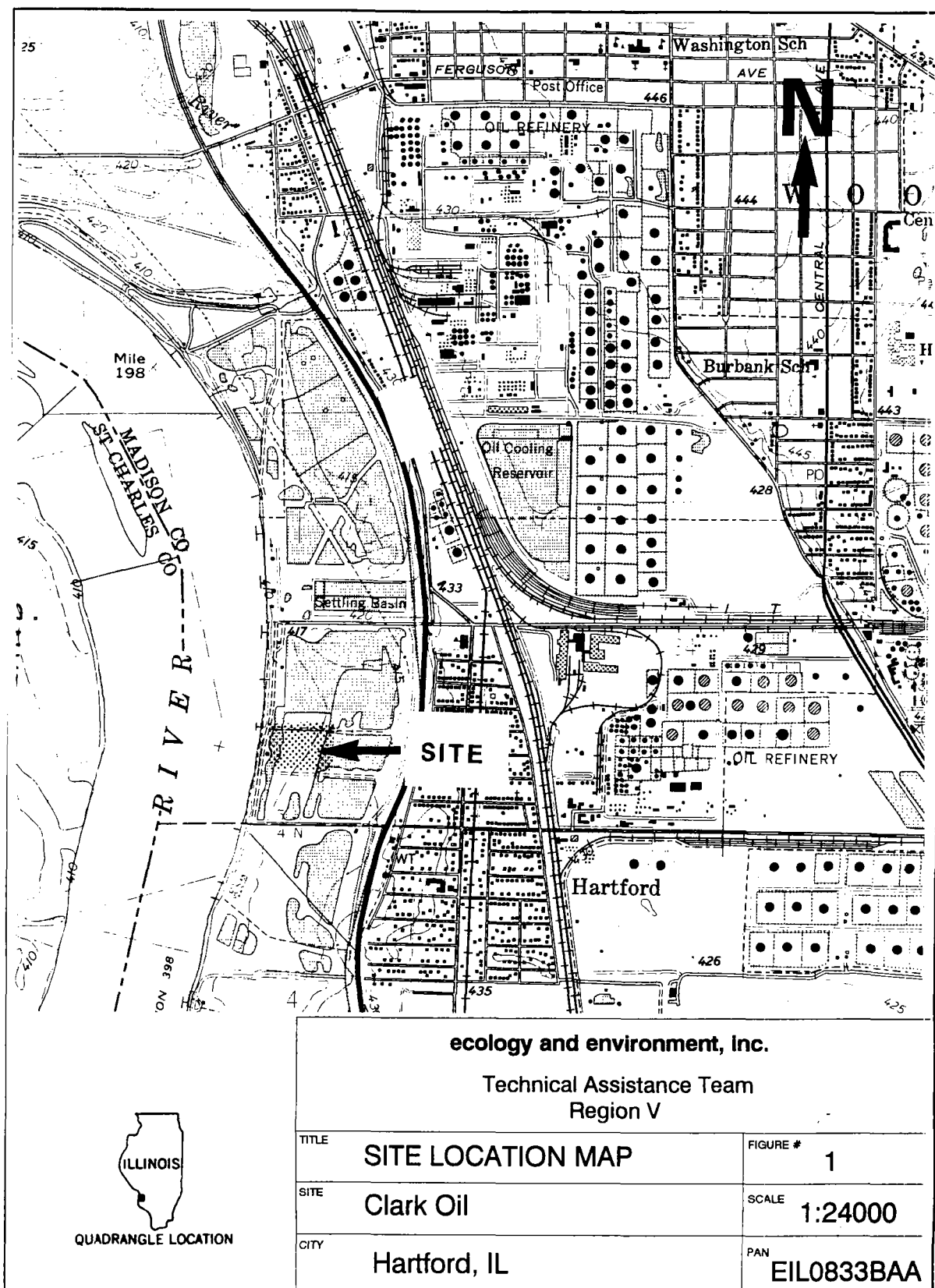
Lisa Graczyk, TAT Member

cc: Tom Kouris, TAT Leader
William Simes, U.S. EPA OSC

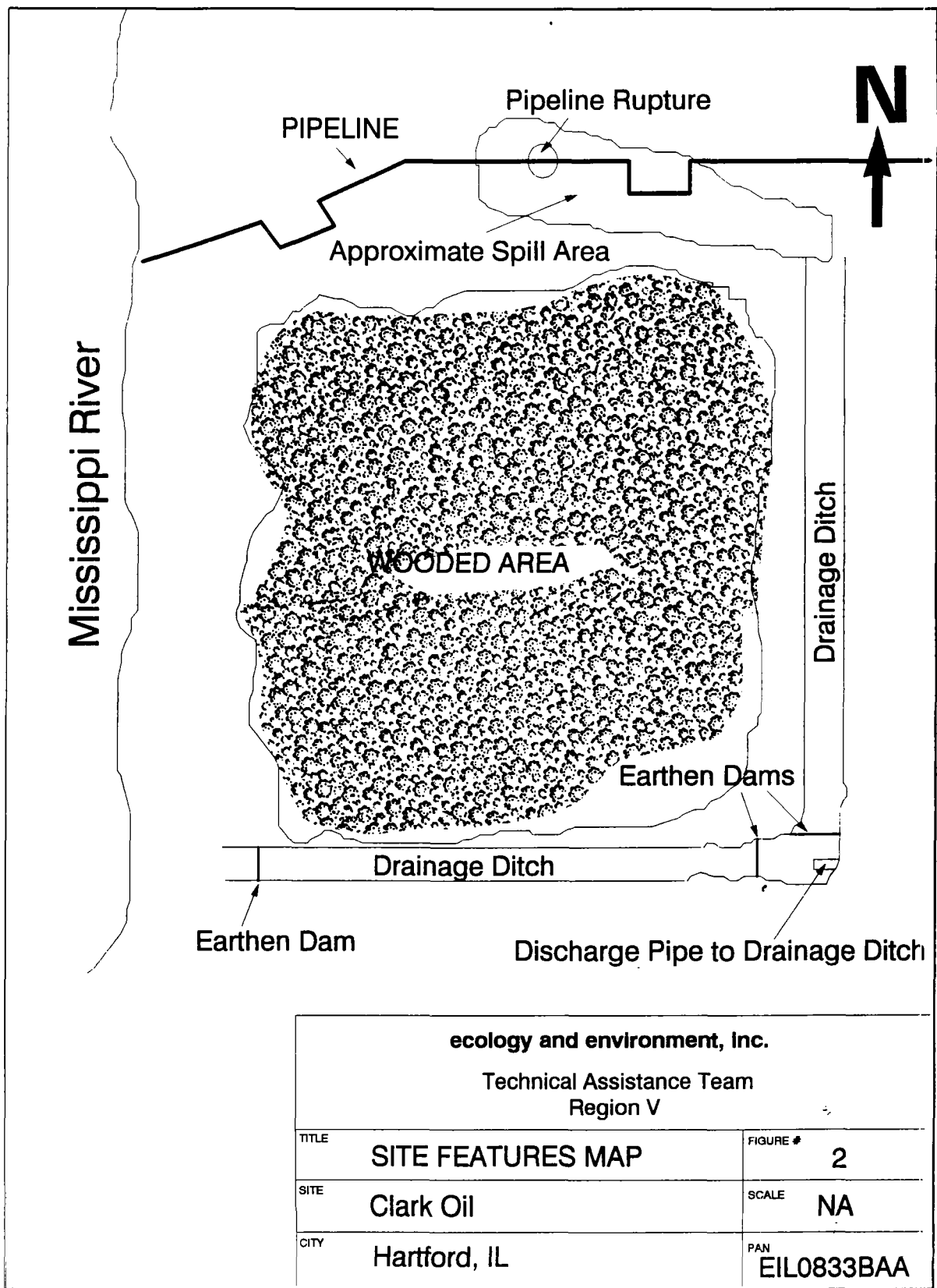
Attachments: Attachment A, Site Figures
Attachment B, Site Photographs

ATTACHMENT A

SITE FIGURES



SOURCE: USGS, Wood River Quadrangle, 7.5 minute series, 1955, photorevised 1968 and 1974



ATTACHMENT B
SITE PHOTOGRAPHS

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Clark Oil

PAGE 1 OF 8

U.S. EPA ID: ---

TDD: T05-9403-007

PAN: EIL0833BAA

DATE: 03-12-94

TIME: 1230

DIRECTION OF
PHOTOGRAPH:
North

WEATHER
CONDITIONS:
Sunny, 75°F

PHOTOGRAPHED BY:
Lisa Graczyk

SAMPLE ID
(if applicable):
NA



DESCRIPTION: Break in pipeline.

DATE: 03-12-94

TIME: 1230

DIRECTION OF
PHOTOGRAPH:
Northeast

WEATHER
CONDITIONS:
Sunny, 75°F

PHOTOGRAPHED BY:
Lisa Graczyk

SAMPLE ID
(if applicable):
NA



DESCRIPTION: Stained soil and leaves south of pipeline break.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Clark Oil

PAGE 2 OF 8

U.S. EPA ID: ---

TDD: T05-9403-007

PAN: EIL0833BAA

DATE: 03-12-94

TIME: 1230

DIRECTION OF
PHOTOGRAPH:
East

WEATHER
CONDITIONS:
Sunny, 75°F

PHOTOGRAPHED BY:
Lisa Graczyk

SAMPLE ID
(if applicable):
NA



DESCRIPTION: Asphalt spill near pipeline. This is the point where spill ends to the west.

DATE: 03-12-94

TIME: 1230

DIRECTION OF
PHOTOGRAPH:
West

WEATHER
CONDITIONS:
Sunny, 75°F

PHOTOGRAPHED BY:
Lisa Graczyk

SAMPLE ID
(if applicable):
NA



DESCRIPTION: Asphalt spill near pipeline looking west. Foreground is where asphalt spill turns and flows into drainage ditch.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Clark Oil

PAGE 3 OF 8

U.S. EPA ID: ---

TDD: T05-9403-007

PAN: EIL0833BAA

DATE: 03-12-94

TIME: 1230

DIRECTION OF
PHOTOGRAPH:

WEATHER
CONDITIONS:
Sunny, 75°F

PHOTOGRAPHED BY:
Lisa Graczyk

SAMPLE ID
(if applicable):
NA



DESCRIPTION: Northern end of drainage ditch where asphalt first flows into ditch.

DATE: 03-12-94

TIME: 1230

DIRECTION OF
PHOTOGRAPH:
South

WEATHER
CONDITIONS:
Sunny, 75°F

PHOTOGRAPHED BY:
Lisa Graczyk

SAMPLE ID
(if applicable):
NA



DESCRIPTION: North-South stretch of drainage ditch

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Clark Oil

PAGE 4 OF 8

U.S. EPA ID: ---

TDD: T05-9403-007

PAN: EIL0833BAA

DATE: 03-12-94

TIME: 1230

DIRECTION OF
PHOTOGRAPH:
Southwest

WEATHER
CONDITIONS:
Sunny, 75°F

PHOTOGRAPHED BY:
Lisa Graczyk

SAMPLE ID
(if applicable):
NA



DESCRIPTION: Retention pond located north of north-south drainage ditch and north of pipeline.

DATE: 03-12-94

TIME: 1230

DIRECTION OF
PHOTOGRAPH:
South

WEATHER
CONDITIONS:
Sunny, 75°F

PHOTOGRAPHED BY:
Lisa Graczyk

SAMPLE ID
(if applicable):
NA



DESCRIPTION: North-south drainage ditch.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Clark Oil

PAGE 5 OF 8

U.S. EPA ID: ---

TDD: T05-9403-007

PAN: EIL0833BAA

DATE: 03-12-94

TIME: 1230

DIRECTION OF
PHOTOGRAPH:
South

WEATHER
CONDITIONS:
Sunny, 75°F

PHOTOGRAPHED BY:
Lisa Graczyk

SAMPLE ID
(if applicable):
NA



DESCRIPTION: Dam at south end of north-south drainage ditch.

DATE: 03-12-94

TIME: 1245

DIRECTION OF
PHOTOGRAPH:
West

WEATHER
CONDITIONS:
Sunny, 75°F

PHOTOGRAPHED BY:
Lisa Graczyk

SAMPLE ID
(if applicable):
NA



DESCRIPTION: Point where east-west and north-south ditches meet. A discharge pipe from holding ponds flows into here. Water is being pumped from below oil layer to east-west ditch where it will then flow to the Mississippi River.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Clark Oil

PAGE 6 OF 8

U.S. EPA ID: ---

TDD: T05-9403-007

PAN: EIL0833BAA

DATE: 03-12-94

TIME: 1245

DIRECTION OF
PHOTOGRAPH:
East

WEATHER
CONDITIONS:
Sunny, 75°F

PHOTOGRAPHED BY:
Lisa Graczyk

SAMPLE ID
(if applicable):
NA



DESCRIPTION: East-west ditch being bermed in areas where there is oil accumulation.

DATE: 03-12-94

TIME: 1245

DIRECTION OF
PHOTOGRAPH:
North

WEATHER
CONDITIONS:
Sunny, 75°F

PHOTOGRAPHED BY:
Lisa Graczyk

SAMPLE ID
(if applicable):
NA



DESCRIPTION: Oil on east-west ditch.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Clark Oil

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U.S. EPA ID: ---

TDD: T05-9403-007

PAN: EIL0833BAA

DATE: 03-12-94

TIME: 1245

DIRECTION OF
PHOTOGRAPH:
West

WEATHER
CONDITIONS:
Sunny, 75°F

PHOTOGRAPHED BY:
Lisa Graczyk

SAMPLE ID
(if applicable):
NA



DESCRIPTION: East-west ditch.

DATE: 03-12-94

TIME: 1300

DIRECTION OF
PHOTOGRAPH:
North

WEATHER
CONDITIONS:
Sunny, 75°F

PHOTOGRAPHED BY:
Lisa Graczyk

SAMPLE ID
(if applicable):
NA



DESCRIPTION: Boom along the Mississippi River bank.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Clark Oil

PAGE 8 OF 8

U.S. EPA ID: ---

TDD: T05-9403-007

PAN: EIL0833BAA

DATE: 03-12-94

TIME: 1300

DIRECTION OF
PHOTOGRAPH:
North

WEATHER
CONDITIONS:
Sunny, 75°F

PHOTOGRAPHED BY:
Lisa Graczyk

SAMPLE ID
(if applicable):
NA



DESCRIPTION: Booms in place along the Mississippi River bank.

DATE: 03-12-94

TIME: 1300

DIRECTION OF
PHOTOGRAPH:
South

WEATHER
CONDITIONS:
Sunny, 75°F

PHOTOGRAPHED BY:
Lisa Graczyk

SAMPLE ID
(if applicable):
NA



DESCRIPTION: Boom in place along the Mississippi River bank.